

# The status of the Red-footed Booby *Sula sula* at Ascension Island

by K. E. L. Simmons

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In an earlier paper (Simmons 1968), on the basis of my few sightings during 1962–64 and an assessment made after the BOU Centenary Expedition of 1957–59 (Ashmole 1963), I assumed that the Red-footed Booby *Sula sula* was on the point of extinction at Ascension Island (South Atlantic Ocean). Olson (1977), not having encountered the species in 1970 and 1971, further suggested that it might by then have been “altogether extirpated” there. Having long been reduced to a tiny remnant population based on Boatswainbird Islet (BBI) off the southwest coast of the main Island (Stonehouse 1962, Dorward 1962, Ashmole 1963, Simmons 1968), *S. sula* is certainly now the least numerous of the 3 pan-tropical boobies which occur at Ascension, where the Brown Booby *S. leucogaster* and especially the Masked Booby *S. dactylatra* continue to breed in good numbers. Its predicted demise has not, however, been confirmed by more recent observations.

## Earlier status

With the main exception of the Sooty Tern (Wideawake) *Sterna fuscata*, the indigenous seabirds of Ascension have long been banished to the safety of BBI, the 14 occupied coastal stacks, and the steeper parts of the coastal perimeter of the main Island. As shown by the sub-fossil records (Ashmole 1963, Olson 1977), *S. sula* was one of the species that once inhabited the large inland seabird colonies in the vicinity of Sisters Peak and Mars Bay, all totally deserted since the last century due to man and his introduced animals, most notably cats (the predations of which, from a large feral population, continues unchecked to this day). In the absence of the trees typically used for nesting by *S. sula* elsewhere in its range, the birds must have built their nests mainly on rock-tops and other tree-substitutes in the lava flows (Ashmole 1963, Simmons 1967b).

Early cases of actual nesting at Ascension are lacking, however, and the absence of trees for most of the recent past has led ornithologists to doubt whether the species ever bred there at all, at least in historical times (Murphy 1936). Apart from the sub-fossil record, and despite the fact that the Island was once designated as the type locality of the species (see Murphy 1936), the earlier evidence for breeding at Ascension is tenuous and seems to rest entirely on the testimony of Osbeck (1771) who landed there in 1752. None of the main expeditions in the 19th century reported any *S. sula* (Murphy 1936, Olson 1977), nor did a party from the Cleveland Museum of Natural History which spent 2 weeks collecting seabirds on BBI in 1925 (Simmons 1927), though a specimen obtained by an American expedition in March 1890 (prepared as a skeleton) has since been re-discovered (Olson 1977). Another specimen, from a small collection made by Dr H. W. Acland in 1856 and identified by Sclater (1856),

appears to have been previously overlooked; this bird (a light-morph adult) has now been traced for me to the Oxford University Museum by Dr E. K. Dunn. Two further specimens were collected by the Scottish National Antarctic Expedition during a visit to Ascension in June 1904 (N. P. Ashmole; see Eagle Clark *et al.* 1913); at least one of these, a near adult light-morph bird, survives in the Royal Scottish Museum, Edinburgh, where it was identified for me by Dr Ashmole.

The only substantial numbers of *S. sula* ever reported during the present century were the "thousands" observed by Tomlinson (1947) on 1 June 1946 day-roosting upon high crags in the vicinity of Powers Peak, White Hill, and Weatherpost near the southwest coastal area of the main Island opposite BBI. These were mainly light-morph adults (i.e. all-white but for black on the wings) and a specimen obtained at the time confirmed the identification. Col. Tomlinson, who had by then resided at Ascension for several years, also believed that large numbers of boobies seen flying parallel to the coast at English Bay at sunset on about 25 May were the same birds. The only white boobies he had seen previously were *S. dactylatra* on BBI and he was convinced that no *S. sula* were present there at the time. The birds reported to him in late May 1946 were said by St Helenians, who had worked at Ascension for many years, to arrive annually and settle in the same area for about 8 weeks between May and June, then disappear again.

During the BOU Expedition of 1957–59, Ashmole (1963) provisionally identified 3 booby skulls he had collected on White Hill as those of *S. sula*. He considered Tomlinson's birds to have been the survivors of the original Ascension population that had been reduced by old age to a largely non-breeding remnant by 1957–59. Olson (1977) confirmed Ashmole's identification and suggested that, as it was unlikely that such large numbers had remained undetected at Ascension until 1946, the birds were possibly emigrants from Fernando Noronha, perhaps disturbed by human activity during the Second World War. The area of Ascension where Tomlinson saw his birds, however, was then (and until the mid-1960s) far less accessible than it is today, for, until the modern road was built, it took most of a day's difficult hike via Green Mountain to get there and back; further, competent ornithological observation away from the mainland Wideawake fairs was negligible until 1957 and, Tomlinson apart, went wholly unreported. Large numbers of *S. sula* could, therefore, have gone undetected for years, especially if the birds appeared only seasonally as claimed. Nevertheless, Tomlinson's record does not wholly convince and it is by no means unlikely that most of the boobies he saw, including those flying past English Bay, were actually *S. dactylatra*, as this species is known to attempt to breed opposite BBI from time to time and to fly past the north of the Island near English Bay in large numbers on its way to spend the night on BBI.

### BOU Expedition 1957–59

The BOU Expedition, during some 18 months, did find up to about 30 *S. sula* on BBI, representing some 10 pairs. These birds were continuously present on the steep cliffs, though their nest sites—with a



Figure 1. Sketch-map of Ascension Island. Coastal stacks are numbered 1–14. The approximate sites where sub-fossil bones of *S. sula* were discovered are indicated by single circles.

single exception (see photograph by D. F. Dorward in Nelson 1978, Plate 12)—were inaccessible and they were not proved to breed successfully (Stonehouse 1960, 1962, Dorward 1962). None was found elsewhere, except on the mainland near BBI where nest-material was collected (Ashmole 1963).

Few data were presented in the official expedition reports of these first definitive records of *S. sula* on BBI and its attempted breeding there, and some of the information was conflicting; for example, the cliffs frequented by *S. sula* were said to be on the northwest of BBI by Dorward (1962) but on the southeast by Stonehouse (1962). Stonehouse's (1960) book provides a few more facts, however: though ultimately unsuccessful, the observed nest did hold a downy nestling for a time; the breeding pair, as also most of the rest of the population, were dark-morph birds (brown with white tails); and the small colony appeared to be nesting annually at some time between April and September. In addition, Dr Stonehouse tells me that there were about 10 or 12 pairs, plus hangers-on, present April–September; that the colony was on the southwestern side of BBI, all nests but one being out of view from above—occupancy being judged from the presence of squatting birds (max. 12 nests) seen on approaching or leaving BBI by sea; and that the occupied nest was deserted after the nestling disappeared. Dr N. P. Ashmole also informs me that he photographed the adult and chick on 25 May 1958, this indicating laying in late March or early April.



### Observations 1962–64

I was resident in Georgetown (GT), Ascension, for 25 months during 1962–64, but visited BBI only on 5 March 1963, when I saw just a single *S. sula*—a light-morph bird—in flight nearby (Simmons 1968), though I did not inspect the cliff-faces occupied during 1957–59. I also saw single *S. sula* when visiting the area opposite BBI on occasions: a dark-morph adult in soaring flight over the mainland near Powers Peak in June 1962 and a light-morph adult there collecting nest-material (which it took back to BBI) in July 1962. On 8 dates in December 1962 and January 1963, a single light-morph adult paid visits to the *S. leucogaster* colonies I was studying near GT (see Simmons 1967a,b, 1970) and was observed displaying to the other species; what was presumably the same bird flew up-coast near GT one evening in April 1963 (Simmons 1968).

These were the only sightings anywhere along the western coast of Ascension during daily observations on seabirds during 2 years. None was seen even in the feeding congregations (of up to 500 *S. leucogaster* and 90 *S. dactylatra*, plus some 130 Ascension Frigatebirds *Fregata aquila*) that formed frequently just off-shore in 1962 during a prolonged influx of pelagic fish. I saw no *S. sula* on my return visit in April 1966 but I did not go to BBI or the vicinity of the main Island opposite it, my activities being confined to the northwest coast where no *S. sula* turned up at the *S. leucogaster* colonies or joined feeding birds nearby.

### Observations 1971–77

I returned to Ascension 3 times during the 1970s. On the first trip (15 December 1971 to 11 January 1972), I was able to visit BBI on 8 January: no *S. sula* were seen from the top of the islet but examination of the southwest cliffs from the anchorage just west of the natural arch and landing (see map in Stonehouse 1962) revealed 2 light-morph adults perched c. 10 ft apart and a dark-morph adult in flight nearby. The only other boobies seen off the west coast near GT and at the colonies on Stacks 1 and 2 (to which my work was mostly confined) were *S. leucogaster* and passing *S. dactylatra*; but, on retrospect, 2 white boobies glimpsed on Stack 5 from the sea on 8 January and thought to be *S. dactylatra* may well have been *S. sula*. On my second trip (20 December 1972 to 11 January 1973), when I was unable to visit BBI or the area of Powers Peak, I saw no *S. sula* from English Bay, Mars Bay and North East Bay, nor in the GT area or elsewhere off the west coast. A team from the BBC (Ned Kelly and Maurice Tibbles) visited BBI for filming after we left, remaining there a few days, but reported no *S. sula*.

The picture was transformed, however, on my last 1970s' trip (16 December 1976 to 14 January 1977). Although I was again unable to visit BBI, R. J. Prytherch and I did examine its western cliffs from the mainland through a powerful telescope on 4 dates, recording the following *S. sula* (all perched on ledges unless otherwise stated):

19 December 1976, from Weatherpost, late afternoon: 4 light-morph adults singly at various points in the same general area of the southwest cliffs where I had seen the birds in 1972.

26 December 1976, from Powers Peak, 17.15 to 18.30 GMT: 11 birds at first and eventually 16 in the same area, 1–2 of which flew about at times and changed perches. All were light-morph birds (2–3 sub-adults) mostly settled in one section of the steep cliff, with a few at another site a little further north.

8 January 1977, from Spire Beach at sea-level almost directly opposite the west coast of BBI, 13.00 to 14.15 (R. J. Prytherch): 9 birds, all light-morph (one sub-adult), including 4 at sites not visible from Powers Peak.

8 January 1977, from Powers Peak, 18.15 to 18.30 (R. J. Prytherch): 7 birds, all light-morph (including one sub-adult).

12 January 1977, from Powers Peak, 13.45 to 14.00: 5 light-morph adults, 18.30 to 18.45: 11 adults—9 light-morph and 2 dark-morph (one of which was in flight).

In all, we located at least 18 individual *S. sula* on BBI: 16 light-morph, of which at least 2 were sub-adults, and 2 dark-morph adults. The total population must have been higher than this, allowing for further occupied sites on the far northwest cliffs and for birds hidden in dead ground or absent at sea. It is also most likely that we missed further dark-morph adults—and any juveniles (see below)—as these brown birds are much harder to see at a distance unless flying, as we found also with *S. leucogaster*. Unlike the numerous breeding *S. dactylatra*, with their nestlings and dependent juveniles, the *S. sula* showed no evidence of nests or of any stage of breeding, appearing to be mainly loafing and preening.

No *S. sula* were encountered in the South East Head area or during an inspection of Stacks 10–14 in Cocoanut and Pillar Bays off the south coast, or off Mars Bay. There were, however, again some sightings in the GT area:

21 December 1976, 11.50 to 13.00, 15.00 to 16.35, 18.00 to 18.30 GMT: a light-morph sub-adult located (and photographed) on mainland rocks near Stack 1, day-roosting with immature and sub-adult *S. leucogaster*. It left at 18.27, flying up-coast.

27 December 1976, afternoon: absent in the morning, the same bird was again present at the same spot where it was netted and ringed by R. J. Prytherch, afterwards settling on Stack 1. It was seen again later (18.48), flying in the vicinity of Stack 2 and then further down the coast before moving out of sight into Clarence Bay.

29 December 1976, 06.45: an all-dark juvenile appeared briefly amidst a large feeding congregation of seabirds (mainly *S. leucogaster*) in Clarence Bay, then flew on down-coast (R. J. Prytherch).

3 January 1977, 06.35: a light-morph sub-adult arrived from the south with a small flock of *S. leucogaster* and briefly joined a feeding congregation in Clarence Bay before flying out to sea and then heading south again (R. J. Prytherch). This was a different individual from the one seen near Stack 1.

During 7 evening sea-watches just east of North Point, from near where Tomlinson had sighted large numbers of passing boobies in 1946, we also obtained the following records of *S. sula*, all but one of the birds travelling southeast towards BBI, mostly close inshore and usually, at least for a time, in company with greater numbers of *S. leucogaster*:

22 December 1976, 18.45 to 19.30: a light-morph sub-adult in failing light.

24 December 1976, 18.45 to 19.30: 5 singletons (19.02 to 19.25)—3 light-morph adults, one white-morph sub-adult, and one all-brown juvenile. All but one bird passed us, virtually overhead, closely following the shoreline.

28 December 1976, 18.25 to 19.40: 2 singletons—an all-brown juvenile (18.58) and a light-morph sub-adult (19.03).

2 January 1977, 18.50 to 19.45: a light-morph adult (19.40 in poor light).

5 January 1977, 18.30 to 19.40: 5 singletons—an all-brown juvenile (18.30, going west), a white-morph sub-adult (18.37), 2 light-morph adults (18.42 and 19.40), and a dark-morph adult (19.35).

7 January 1977, 17.30 to 19.30, at new site further east (Klinka Club): 3 single light-morph adults (at 18.53, well out to sea, 18.57, and 19.27).

Thus, 1–5 *S. sula* were seen on all but one of our sea-watches, the tallies being: light-morph adult, 9; light-morph sub-adult, 4; dark-morph adult, one; and juvenile, 3. Other seabirds logged were: Madeiran Storm-petrel *Oceanodroma castro* (small numbers), *S. leucogaster* and *S. dactylatra* (many, passing frequently in flocks), *F. aquila* (a few), White (or Fairy) Tern *Gygis alba* (a few), Black Noddy *Anous minutus* (numerous on all watches), Brown Noddy *A. stolidus* (a few), and *S. fuscata* (just 2 singletons, the breeding pairs of this species being currently unoccupied, though a new season was imminent). These sea-watches proved that—at least at times—very small numbers of *S. sula* regularly pass North Point towards BBI in the late afternoon. Such sea-watches therefore, are a useful means of monitoring the continuing presence of this species at Ascension if visits to BBI or its vicinity are not possible. As *S. dactylatra* was shown to pass North Point in large numbers offshore, the identification of the white boobies seen by Tomlinson in 1946 as *S. sula* is questionable.

### Recent sightings

Apart from a single sighting in May 1982 (Bruce 1983), any further information on the continuing presence of *S. sula* at Ascension was lacking during the early 1980s. Two filming teams, Anglia Survival Ltd (1983) and the BBC again (1987), did not record the species on BBI, nor did Dr B. C. Livezey on 14 January 1984 and Dr J. de Korte on 8–10 February 1987 (den Hartog 1987). During a visit late in 1985 by members of a Joint-Services expedition to Ascension ("Exercise Maritime Ascension '85"), only a single (light-morph) bird was seen—from the top of BBI on 25 November (R. H. J. Nash).

However, fears that the species had finally disappeared from Ascension were confounded by the findings of the Royal Air Force Ornithological Society expedition in February 1987, just after Dr de Korte had left (Blair 1989 and *in litt.* to Dr T. H. Johnson; see also den Hartog 1987). During 2 visits by boat to view BBI from the sea, at least 20 adult *S. sula* were located on the cliffs or in flight on the first occasion and 15 on the cliffs on the second. Amongst the latter group of apparently nesting birds on the



northwest side, were 3 downy young; though not certainly associated with the adults, the possibility that they were of the same species is strong. There were also 15 coastal sightings—12 off or near the North Point area (where birds had been seen passing in 1976–77) during evening sea-watches, 2 near North East Bay, and one off the northwest coast near Stacks 4 and 5—and also one record of a group of 3 travelling away from Ascension one evening off GT. Nearly all the *S. sula* seen in February 1987, including 14 out of the 15 on the northwest cliffs of BBI, were light-morph birds. In November 1988, during a joint RAFOS/Army Bird Watching Society visit to Ascension ("Exercise Booby I"), there were several further sightings (R. H. J. Nash): from 1–4 during each of 15 evening sea-watches from the Klinka Club (34 in all—the tallies being light-morph adult 24; dark-morph adult, 6; and all-brown juvenile, 2); 2 adults and a juvenile on BBI; a light-morph adult twice on Stack 5 (where I had seen 2 light-morph possibles in 1972); a light-morph adult off Mars Bay; and a dark-morph adult on Stack 12 in Pillar Bay.

In March 1990, Dr and Mrs N. P. Ashmole and I (as members of the ICBP Seabirds Specialist Group's "Seabirds on Islands" team) visited Ascension together with the ABWS's expedition "Exercise Booby II" (leader Major R. H. J. Nash). The full results of this visit have still to be collated but there were some 30 *S. sula* sightings during evening sea-watches conducted off the north and northeast coasts by members of the ABWS party, mostly of light-morph birds (but including a probable all-brown juvenile seen by me on 10 March). At least one adult was seen on one of the stacks in Pillar Bay (where a dark-morph adult was photographed in October 1989 by Sam Turtle, a resident on the island), 2 light-phase adults on or near Stacks 4 or 5, and an all-brown juvenile on Stack 5.

Nine light-morph and 4 dark-morph adults were counted during a boat trip around BBI on 16 March (R. H. J. Nash, N. P. Ashmole). From Weatherpost on 24 March, between 10.30 and 12.00 hrs, through a telescope, I myself located 3 light-morph adults on BBI—2 on the northwest cliffs and one in flight; there was no sign of breeding. No birds, however, were located on the west and northwest cliffs of BBI from Hummock Point on 26 March, between 11.00 and 11.40. At about the same time, members of an American party from the University of Georgia, collecting marine specimens, saw 4–5 *S. sula* (all but one light-morph adults) on the south cliffs to the west of the landing. With 2 of these birds was a large chick in the down-shedding stage assumed to be their offspring (Dr J. C. Avise). No *S. sula* were seen at the colonies of *S. leucogaster* at Stacks 1 and 2 where I again mostly worked in 1990, or elsewhere in the GT area, but, in addition to the ABWS sightings, 3 adult *S. sula* were found on Stack 4 at dawn on 4 April by N. P. and M. J. Ashmole—a lone dark-morph adult and an apparent light-morph/dark-morph pair (which were seen to copulate), the first definite record of such a mixed-morph couple at Ascension.

### Discussion

In spite of earlier misgivings, it is clear that *S. sula* is still surviving at Ascension Island. Further, the presence of free-flying sub-adults and

juveniles and records of probable unfledged young indicates that breeding, by some pairs at least, continues there and is successful at times, with a total population still of the same small size as that reported by the BOU Centenary Expedition in 1957–59. Recent sightings of birds away from BBI—on stacks in Pillar Bay and south of English Bay—suggest that the species may even be in the process of expanding its range at Ascension. Although, like the majority of the indigenous seabirds, *S. sula* is still excluded from the main Island by feral cats (the unchecked presence of which remains a continuing conservational disgrace), there is every reason to believe that this booby will continue to exist at Ascension provided that its small population (on BBI especially) is not adversely affected by the increasing activities of man following the establishment of an RAF base and the expansion of the airport in the 1980s.

Nevertheless, still very little is known about the true status and activities of *S. sula* at Ascension, all studies there to date (including the present one) having been essentially superficial in nature. No one in recent decades has even located a nest let alone seen a bird certainly sitting on one, or feeding a nestling or juvenile—for, like *S. leucogaster* at Ascension (Simmons 1967a, 1970), the young *S. sula* must return to its birth site for parental feeding for a long and adaptively variable period extending over many weeks or months after fledging. We have little idea of the daily routines of the adults nor, for example, the variation in size of the population present on the cliffs of BBI from hour to hour, day to day, or longer. The dark-morph birds now seem to form only a small minority in the population (an apparent change since 1957–59) but, as they are less easy to record, they may well be significantly overlooked; nor do we have any information on whether they follow a different feeding strategy from the light-morph birds—being more nocturnal for instance, in keeping with their plumage-type (see Simmons 1972). What is needed is an extended monitoring of the visible cliffs of BBI from the main Island, with a mapping of occupied perching and nesting places, for all the months of the year. This could be supplemented by surveys from the sea when conditions are favourable, observations from BBI itself (officially prohibited at present) being largely ineffective. Though such a programme would best be conducted by a dedicated resident at Ascension, much could still be achieved by visiting teams of ornithologists if their efforts were efficiently co-ordinated.

Ashmole (1963) propounded the acceptable view that the *S. sula* seen on BBI during 1957–59, and perhaps also the larger numbers recorded nearby in 1945, were the descendents of the original Ascension population which had once also occupied the main Island itself. It seems to me that, in the absence of any direct evidence of immigration, the Ascension *S. sula* could best be considered as comprising a resident endemic deme differing from all other populations of the species in the South Atlantic by its unique cliff-nesting habits. Ashmole also thought that it was improbable that the (apparent) influx in 1945 was due to long-distance immigration from the islands of Fernando Norhona or South Trinidad (Trindade), both some 1300 miles from Ascension, to the northwest and southwest respectively. One or both of these places, where the species is solely a tree-nester, was later again suggested as the origin of Tomlinson's



birds (Olson 1977, den Hartog 1987) and even of the present population at Ascension (den Hartog). Fernando Norhona was favoured by Olson (because of increased human disturbance there during the Second World War), south Trinidad (where the *S. sula* population had crashed owing to the destruction of trees) by den Hartog, who also attributed the recent build-up of numbers at Fernando Norhona to emigration from South Trinidad. Wholly underestimating the predatory powers of the feral cats at Ascension, den Hartog further suggested that the Island's original population had probably been extirpated during the last century, not by the cats but by man himself.

Any objections to the immigration theory on the basis of the great distances involved must now flounder, for significant long-distant movements of *S. sula* have been recorded in the Pacific (references in den Hartog 1987) and single vagrants of this species have occurred in Norway (in June 1985, Bentz 1988) and on Cima, Cape Verde Islands (in August 1986, den Hartog). So it is not entirely improbable that as suggested by den Hartog, we are dealing with a single pan-oceanic, inter-island travelling population of *S. sula* in the tropical South Atlantic. The question must remain open, however, but on balance I still favour the more conservative view that the Ascension birds form a distinctive long-standing and isolated population of the species.

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## Presumed breeding of Tawny Pipits *Anthus campestris* in the Afrotropics

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A male Tawny Pipit *Anthus campestris* with advanced gonads is mentioned for Somalia in Ash & Miskell (1983, 1988). This particular bird was one of several pale pipits seen resembling *A. campestris* in the northern part of the country in May 1979, and one of 2 of which were collected. Because such records were particularly interesting and unlikely to be rechecked in the field in the foreseeable future, the 2 specimens were deposited in the British Museum (Natural History), Tring. Identification as *A. campestris* was confirmed after comparison with other material, and agreed by P. R. Colston, who kindly twice rechecked and reconfirmed this at our request. Collecting details of the 2 specimens are as follows: Ref. 650, ♂ 1 May 1979 at 5 km SW of Bacaadaweyn (7°09'N, 47°31'E), testes 5 mm—BM Registration No. 1982/3/15; Ref. 691, ♂ 15 May 1979 at 37 km WSW of War Idaad (9°10'N, 45°59'E), testes 7 mm—BM Registration No. 1980/7/5.

### Field observations

A bird similar to the one collected on 15 May was seen on the same day at 4 km WSW of War Idaad (9°17'N, 46°13'E). Next day 2 pairs were actively nest-building at 19 km east of War Idaad (9°19'N, 46°25'E). There was no doubt that all these birds were the same species, but we were not entirely certain at the time that they were Tawny Pipits.

Further birds, possibly the same species, but not described in sufficient detail for later reassessment, were common on 3 May at a lake 6 km west of Oog (8°56'N, 46°34'E), between War Idaad and Bacaadaweyn; the nest of one of these pairs contained 3 eggs on a revisit on 23 May. A further 2 were